

REMARKS

Claims 1, 6, 8-10, 16-20, 24-28, and 30 are pending in this application, with claims 1, 6 and 24 being independent. By virtue of this response, claims 1 and 6 are amended. No new matter has been added.

Rejection of the Claims Under 35 U.S.C. § 112, first paragraph

Claims 1, 6, 8-10, 16-20, and 24-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. Specifically, claims 1, 6, and 24 are rejected based on the allegation that, “Applicant’s disclosure fails to provide support for making the determination of whether the frame is destined for a network device of the first trunk group and furthermore forwarding the frame from the first network device to a network device of the first side to which the frame is destined if the frame is not destined for one of the network devices of the second trunk group.” See Office Action, paragraph 6.

In Applicant’s response of August 3, 2010, Applicant pointed out that at least FIGS. 2 and 4, and associated description, and/or at least paragraphs [0005-0007] and [0021] provide sufficient written description for claims 1, 6, and 24 under 35 USC 112, first paragraph. The present Final Office Action purports to respond to these arguments by stating, “applicant’s specification never defines forwarding normally in the manner recited in the claims.” See Final Office Action, paragraph 1.

However, Applicant respectfully submits that none of claims 1, 6, or 24 recite “forwarding normally.” Consequently, any discussion of whether the specification supports “forwarding normally” under 35 USC 112, first paragraph is moot. In actuality, for example, claim 1 merely recites, “forwarding the frame from the first network device to a network device of the first side to which the frame is destined.”

In this regard, Applicant submits that “(t)he ‘written description’ requirement implements the principle that a patent must describe the technology that is sought to be patented; the requirement serves both to satisfy the inventor’s obligation to disclose the technologic knowledge upon which the patent is based, and to demonstrate that the patentee was in possession of the invention that is claimed.” *Capon v. Eshhar*, 418 F.3d 1349, 1357, 76 USPQ2d 1078, 1084 (Fed. Cir. 2005). Applicant submits that Applicant’s description clearly supports forwarding of a

frame between a first and second network device, as claimed, and as set forth in at least the above-referenced portions of Applicant's description. For example, in the specific example of FIG. 2, if the frame is received at device 210 and is not destined for a member on the other side (i.e., not for either device 220, 221), then the frame is destined for the device 211 on the same side of the assembly as the device 210. Then, the frame may be forwarded using the expansion port (exp tx) of the device 210, as clearly shown and described with respect to FIG. 2. That is, Applicant submits that FIG. 2 clearly illustrates the use of the expansion ports (exp tx of device 210 and exp rx of the device 211) to forward frames between the devices 210, 211.

Applicant submits again that such disclosure is more than sufficient to provide written description for the actual recited claim language of claim 1. To argue otherwise is to take the position that one of skill in the art would not have believed that the Applicant was capable of (i.e., in possession of the ability of) forwarding frames between devices 210, 211 using the illustrated/described ports exp tx and exp rx.

Applicant recognizes that the specification uses the wording "forward(ing) normally," and takes the position that such wording is merely an acknowledgement of, and reference to, the fact that such forwarding, by itself, is well-known in the art. The Office Action makes no showing or allegation that such forwarding, by itself, would not have been conventional knowledge, and instead just makes the conclusory statement(s) that "applicant's specification never defines forwarding normally in the manner recited in the claims." As just described, Applicant submits that this reasoning is spurious, because the claims do not, in fact, recite "forwarding normally," and there is more than sufficient description for the actual recited language of claim 1, as set forth above. The fact that the specification also happens to use the phrase "forward(ing) normally," even assuming arguendo that the phrase is "not defined" in the specification as alleged, does not change the fact that other portions of Applicant's specification provide sufficient support for, and description of, the language of independent claim 1.

Similar arguments apply for independent claims 6 and 24. Therefore, Applicant requests that the rejections under 35 USC 112, first paragraph be withdrawn.

Rejection of the Claims Under 35 U.S.C. § 112, second paragraph

Claims 1, 6, 8-10, 16-20, and 24-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Specifically, claims 1, 6, and 24 are rejected based on the allegation that these claims, "...recite receiving a frame at a first network device that is on a first side and a member of the first trunk group and determining whether the frame is destined for a network device of the first trunk group or a second network device of the second trunk group. This recitation is unclear and appears redundant since the frame has been received at a (first) network device of the first trunk group, hence the determination would always indicate that the frame is destined for a network device of the first trunk group." See Final Office Action, paragraph 8.

Applicant described in the response of November 23, 2009 that, with reference to the example of FIGS. 2 and 4, a frame received at the device 210 on the first side may be destined for the device 211 that is also on the first side, or may be destined for a device 220 (or 221) on the second side. Thus, such a packet may be received at a first network device of the first side and may simultaneously (not redundantly) be destined for (another) device of the first side.

The Final Office Action now takes the position that "...this may be the case, (but) this is unclear from the current recitation of the claims." See Final Office Action, paragraph 2. Without agreeing with this position, Applicant hereby amends claims 1 and 6 in the manner suggested by the Final Office Action. Applicant submits that these amendments are merely to address the clarity issue(s) alleged to exist, and therefore are not made for reasons of patentability with respect to any art of record. Further, Applicant submits that these amendments do not require new search or consideration, and should therefore be entered.

With respect to claim 24, Applicant submits that claim 24, unlike claims 1 and 6, does not actually recite, "receiving a frame at a first network device that is on a first side and a member of the first trunk group and determining whether the frame is destined for a network device of the first trunk group or a second network device of the second trunk group," as alleged by the Final Office Action and reproduced above. Instead, claim 24 recites, "determine that the frame is destined for a second network device that is a member of a second trunk group on a second side of the assembly" and forwarding the frame to the second network device in the manner recited. Therefore, Applicant submits that the present rejection under 35 USC 112, second paragraph is not applicable to claim 24, and requests that it be withdrawn.

Consequently, Applicant respectfully requests that all rejections under 35 USC 112, second paragraph be withdrawn.

Rejection of the Claims Under 35 U.S.C. § 103 – Kalkunte in view of Bare

Claim 1, 6, 8-10, 16-20, and 24-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Publication No. 2002/0027908 to Kalkunte et al. (hereinafter “Kalkunte”) in view of U.S. Patent Publication No. 2003/0016624 to Bare (hereinafter “Bare”).

Claim 1 recites:

A method of handling frames, said method comprising:
receiving a frame at a first network device of an assembly of network devices divided into a first trunk group on a first side and a second trunk group on a second side, wherein the assembly includes a plurality of high-speed links connecting devices on the first side to corresponding devices on the second side, and wherein the first network device has a first high-speed port connected to a first high-speed link of the plurality of high-speed links and is on the first side and a member of the first trunk group;
determining, using the first network device, whether the frame is destined for a network device of the first trunk group or a second network device of the second trunk group;
if the frame is destined for the second network device, determining a path for forwarding the frame to the second side, the path being determined based on achieving a minimized forwarding latency for forwarding the frame to the second network device and including the first high-speed port of the first network device; and
if the frame is not destined for one of the network devices of the second trunk group, forwarding the frame from the first network device to a network device of the first side to which the frame is destined. (emphasis added).

In the Office Action, Kalkunte is alleged to disclose portions of claim 1 within “paragraph 11, and Figure 1” of Kalkunte. See Office Action, paragraph 11.

Paragraph 11 of Kalkunte is reproduced here for convenience:

The present invention is directed to a method of forwarding data in a network switch fabric. An incoming data packet is received at a

first port of the fabric and a first packet portion, less than a full packet length, is read to determine particular packet information, the particular packet information including a source address and a destination address. An egress port bitmap is determined based on a lookup in a forwarding table and it is determined if the destination address belongs to a trunk group of trunked ports. The incoming data packet is forwarded based on the egress port bitmap, when the destination address does not belong to the trunk group. **When the destination address does belong to the trunk group,** a particular trunked port of the trunk group is determined and the incoming data packet is forwarded thereto. **More specifically, the particular trunked port of the trunk group may be determined by calculating a hash value based on the source address and the destination value and selecting the particular trunked port based on the hash value.** Additionally, a class of service for the incoming data packet is also determined from the particular packet information and a priority for forwarding is set based on the class of service.

As may be observed from the above reproduction of paragraph 11 of Kalkunte, Kalkunte discloses determining a port based on a hash value. The Final Office Action admits that Kalkunte does not disclose "...determining a path for forwarding the frame to the second side, the path being determined based on achieving a minimized forwarding latency for forwarding the frame to the second network device and including the first high-speed port of the first network device," as recited in claim 1.

Instead, the Final Office Action asserts that Bare discloses "determining the path based on achieving a minimized forwarding latency," with reference to paragraph 214 of Bare. The Final Office Action goes on to state in paragraph 11 that "(i)t would have been obvious ...to modify determining a path in a fabric switch, as disclosed by Kalkunte, to including minimizing forwarding latency, as disclosed by Bare, in order to incorporate more efficient methods of path determination known in the art."

In response, Applicant submits that these statements are insufficient on their face to establish a *prima facie* case of obviousness. In this regard, Applicant notes that "the examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness." *MPEP* § 2142. In order to establish a *prima facie* case of obviousness, the examiner must interpret the relevant claim, define one or more prior art reference components relevant to the

claim, ascertain the differences between the one or more prior art reference components and the elements of the claim at issue, and adduce objective evidence which establishes, under a preponderance of the evidence standard, a teaching to modify the teachings of the prior art reference components such that the prior art reference components can be used to construct a device substantially equivalent to the claim at issue. This last step generally encompasses providing objective evidence teaching **how to modify the prior art components to achieve the individual elements of the claim at issue**, and providing objective evidence teaching **how to combine the modified individual components such that the claim, as a whole, is obtained**. MPEP § 2141; MPEP § 2143, emphasis added.

This requirement was described by the Supreme Court in *KSR v. Teleflex*, 550 U. S. ____ (2007); No. 4-1350 (April 30, 2007) which stated that such a rejection requires "some articulated reasoning . . . to support the legal conclusion of obviousness." As stated by the Court, obviousness can be established where "there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate review, this analysis should be made explicit." See *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) ('[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.'). *KSR v. Teleflex*, 550 U. S. ____ (2007).

As further described by the Court **"[A] patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.** Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." *KSR v. Teleflex*, 550 U. S. ____ (2007); No. 4-1 350; pp. 14-15 (April 30, 2007).

In the present rejection, the Final Office Action completely fails to provide an articulated line of reasoning as to **how** the proposed modification of Kalkunte by Bare would have been

made in order to arrive at the invention of claim 1. For example, the rejection does not identify any particular element of Kalkunte that would have been modified by any particular element or concept of Bare, or any element of Bare which would have been added to Kalkunte. Instead, the Office Action merely makes a conclusory statement (of exactly the type forbidden by KSR) alleging *why* the proposed modification/combination would have been made (i.e., “to incorporate more efficient methods of path determination,” as reproduced above).

Because the rejection fails to meet the required burden of proof for establishing a prima facie case of obviousness for at least the above reasons, Applicant requests that the rejection of claim 1 be withdrawn until if or when such burden may be met.

Further, Applicant submits that it would not have been obvious to modify Kalkunte using Bare to arrive at the invention of claim 1, because Kalkunte teaches away from the proposed combination. In this regard, MPEP 2141.02 requires that a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Further, “‘A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.’” *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994); see *KSR*, 127 S. Ct. at 1739-40 (explaining that when the prior art teaches away from a combination, that combination is more likely to be nonobvious). Additionally, a reference may teach away from a use when that use would render the result inoperable. *McGinley v. Franklin Sports, Inc.*, 262 F.3d 1339, 1354 (Fed. Cir. 2001).” See *In re Icon Health And Fitness, Inc.*, 496 F.3d 1374, 83 USPQ2d 1746, 1751-52 (Fed. Cir. 2007).

In the present instance, Kalkunte discloses that a port of a trunked group may be determined using a hash value, as described above, for a “switch-on-a-chip solution for a self-routing fabric ... to maximize the ability of packet-forwarding at linespeed...” See Kalkunte, paragraph 0010. In contrast, Bare discloses, “methods and structures for rapidly identifying an alternate path to be used by a switch for forwarding of traffic after failure of a preferred path. See Bare, paragraph 0032. “A potential alternate path is used to send a query message to a neighboring network switch to determine if a path to the identified devices is available ... such

query messages are propagated through all intermediate network switches between the switch sensing the failed port up to the identified network device. Acknowledgment messages are returned to verify potential availability of an alternate path...” See Bare, Abstract. Even if Bare were to teach selection of an alternate path based in part on latency considerations, Applicant submits that Kalkunte is clear that hash values are used to select a trunked port, and modifying Kalkunte to use the method of Bare (e.g., using query messages in response to a failed port) to select a trunked port would therefore change the principle of operation of Kalkunte, in contradiction to MPEP 2143.01(VI), which states, “If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).” Moreover, the rejection makes no showing as to whether any modification of Kalkunte based on Bare would be feasible or workable in the “switch-on-a-chip solution for a self-routing fabric ... to maximize the ability of packet-forwarding at linespeed” environment of Kalkunte, as referenced above.

Consequently, Applicant submits that claim 1 is allowable for at least these reasons, so that dependent claims 16, 17, 19, 20, and 30 are believed allowable for at least the same reasons. Independent claims 6 and 24 recite the same or similar features discussed above, and are thus believed allowable for the same or similar reasons, along with their respective dependent claims.

Conclusion

Applicant respectfully submits that all claims are in condition for allowance and requests a Notice of Allowance to this effect.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as intended to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Please charge any additional fees or credit overpayment to Deposit Account No. 50-3521.

Respectfully submitted,

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